

**Supplementary Table S4.** Nuclear grade of ductal carcinoma in situ

Feature	Grade I	Grade II	Grade III
Pleomorphism	Monotonous	Intermediate	Markedly pleomorphic
Nuclear size	1.5–2× of RBC or ductal epithelial cell nucleus	Intermediate	>2.5× of RBC or ductal epithelial cell nucleus
Chromatin	Finely dispersed	Intermediate	Coarse or vesicular
Nucleoli	Inconspicuous or absent	Intermediate	Prominent, often multiple
Mitoses	Rare	Intermediate	Frequent
Orientation	Polarized toward luminal spaces	Intermediate	Usually not polarized toward luminal spaces

RBC, red blood cell.